

ORIGINAL ARTICLE

EVALUATION OF THE COMPLIANCE OF PUBLIC HOSPITALS OF ILAM PROVINCE WITH THE CRITERIA OF ELDERLY FRIENDLY HOSPITALS

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ABSTRACT

Background: The elderly population is increasing and one of the problems of this group is the increase in their care needs. This research was conducted with the aim of evaluating the compliance of public hospitals of Ilam province with the criteria of elderly friendly hospitals.

Material & Method: This was a comparative quantitative-cross-sectional study with statistical population including 122 managers, supervisors and head nurses from eight hospitals in Ilam province using head count method during the calendar year 2021. The data collection tool was the elderly-friendly hospital list. Due to small sample size single-group comparative test was used, and one-way ANOVA and POST-HOC tests were used to compare the examined hospitals with each other.

Results: The study population was all managers, supervisors of medical, surgical and emergency wards of eight hospitals in Ilam province, accounting total 122 people. Based on the findings and comparison of these public hospitals with the senior-friendly index, it was determined that the average indices were 0.725, 0.866, 0.966, 0.744, 0.945, 0.940, 0.734 and 0.918 for Mostafa, Abdanan, Mehran, Sarableh, Ivan, Darre Shahr, Emam and Dehloran hospitals, respectively. Mostafa Hospital has the lowest average with 0.725 and Mehran has the highest with 0.966. The negative values obtained for the T statistic also prove that these hospitals are at a lower level than the senior-friendly hospital index, however, the T values were significant only for Mostafa, Emam and Sarableh hospitals ($P < 0.01$) and other hospitals, despite being lower than the desired average level, are not significantly different from it ($P > 0.01$).

Conclusion: The conditions related to the environment and equipment of the hospital are acceptable based on the indicators of the elderly-friendly hospital, but in the case of human resources and hospital staff, more attention needs to be paid to the field of training and employment of suitable people familiar with the methods. It was caring for the elderly.

KEY WORDS: Elderly; Hospital; Healthy; Friend.

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INTRODUCTION

The aging phenomenon of society is becoming apparent due to the improved living and health con-

ditions.¹ Various studies have shown that the elderly population in the world and Iran is increasing.²⁻⁴ This phenomenon will have economic, social and health challenges, especially for healthcare providers.⁵

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The world's elderly population is expected to be double in 2025, and may reach at least 2 billion in 2050.⁶ The elderly population of Iran is expected to increase from the current 8% to 22% in 2046.⁷ The elderly population usually need more hospitalization and health services. According to the statistical report of the National Health Insurance of Taiwan, people over 50 accounts for 42.8% of outpatient visits and 52.5% of hospitalizations, which make up 58.4% and

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64.4% of outpatient and hospitalization expenses compared to the total population, respectively. Also 95% of people over 65 were hospitalized at least once a year, while this amount was 91% for the rest of the population. The elderly needed hospital visits of an average 27 times per year as compared to 15 times for other members of the society.⁸ In Iran, estimates show that more than three-quarters of the elderly suffer from chronic diseases and place heavy costs on the shoulders of the health care system. This cost of health care for the elderly is six times of young people and three times of middle-aged people.^{9, 10}

The most important issue is caring needs of the elderly people, which are different in various societies due to social and cultural conditions.¹¹ One of the basic problems that is neglected is to meet the elderly's needs when they are hospitalized, which they experience in different treatment centers.¹² Many elderly people are admitted in hospitals one or more times for different reasons during their life.^{13,14} Some studies have pointed out increased mortality during hospitalization and within one year after discharge.^{16,17} Evidence shows that health care providers, including nurses, do not have the necessary ability to diagnose the elderly's problems in the hospital.^{12,15,18} One of the reasons for this is the lack of specialized training courses for caring the elderly.^{6,19,23,24,27}

The rationale of conducting this research was to point out any shortcomings of medical services providers to the elderly in Iran, and the findings will help out policy makers to find out the solutions. To the best of our knowledge no such research has been done in the past in this regard in Iran. Therefore the aim of this study was to assess the compliance of public hospitals of Ilam province with the criterias of senior-friendly hospitals during the calendar year 2021.

MATERIAL AND METHODS

This quantitative cross-sectional study was conducted with a comparative approach. The study population was all managers, supervisors of medical, surgical and emergency wards of eight hospitals in Ilam province, accounting total 122 people. The reason for choosing the mentioned wards in these hospitals is the high number of visits of the elderly to these wards. The inclusion criteria were at least two years of work experience in the respective wards for the participants. The data collection tool was the WHO senior friendly hospital 50 items checklist^{23, 25}

The measurement range of these 50 three-level questions includes: 0= No; 1 = To some extent and 2 = Yes, so the scores of each subsection of the research tool were calculated by summing up the scores of its dimensions, so the minimum score is 0 and it means that the hospital does not have the desired criteria and the maximum score is 100. To compare each section of the research tool with the WHO checklist, the total scores obtained from that

section are divided by the number of items used to measure the section in question. Therefore, the number that is finally assigned to each section is between 0 and 2.

To determine the validity of the questionnaire, the content validity method was used, the validity of the research instrument was checked and confirmed by the supervisors and advisors, as well as the professors of Geriatric Nursing of Ilam University of Medical Sciences, and its reliability was also evaluated by Cronbach's alpha during a trial distribution among 30 senior managers, supervisors and nurses, and its value was 0.799, which is statistically appropriate. The value of Cronbach's alpha for the parts of this checklist was obtained as described in Table 1. Considering that the number of sample members in this research is relatively small for a parametric test and the type of parametric test used was one-group t, researchers have recommended the use of skewness and kurtosis indices for it.²⁶ Therefore, after the normality test, a single-group comparative test was used, and one-way ANOVA and POST-HOC tests were used to compare the examined hospitals with each other in terms of the indicators of the senior-friendly hospital.

Table 1: Cronbach's alpha of checklist sections

Variable	Number of components	Cronbach's alpha
Access status	3	0.768
Suitable schedule for the elderly to go to the hospital	4	0.777
Health promotion and medical care services	11	0.885
Information and training	6	0.859
Physical environment	8	0.743
Toilets	7	0.788
Signboards	3	0.627
Hospitalization services	3	0.728
Acceptance and payment	4	0.824
Total	50	0.799

The value of Cronbach's alpha for different sections of the elderly-friendly questionnaire was obtained from 0.627 to 0.885, which is statistically acceptable.

RESULTS

Among the 122 sample in this research, the largest numbers of them were from Shahid Mostafa Hospital in Ilam and the lowest frequency was 10 cases, which are related to Abadan and Darre Shahr hospitals (Table 2).

Table 2: Frequency distribution of samples in the investigated hospitals

Hospital	N	%
Mostafa	30	24.6
Abadan	10	8.2
Mehran	12	9.8
Sarablah	14	11.5
Eyvan	14	11.5
Darehshahr	10	8.2
Imam Khomeini	18	14.8
DehIran	14	11.5
Total	122	100

Frequency distribution of the wards of the target hospitals from which the sample was prepared is shown in Table 3. Based on this, the most samples of this research were 16 cases (13.1% of all samples), which were from the nursing office.

Based on the findings and comparison of each of the public hospitals of Ilam province with the senior-friendly index, it was determined that the average of this index is 0.725, 0.866, 0.966, 0.744, 0.945, 0.940, 0.734 and 0.918 for Mostafa, Abadan, Mehran, Sarableh, Ivan, Darre Shahr, Emam and Dehloran hospitals, respectively. Mostafa Hospital has the lowest average with 0.725 and Mehran has the highest with 0.966. The negative values obtained for the T statistic also prove that these hospitals are at a lower level than the senior-friendly hospital index, however, the T values were significant only for Mostafa, Emam and Sarableh hospitals ($P < 0.01$) and other hospitals, despite being lower than the desired average level, are not significantly different from it ($P > 0.01$).

The findings of this comparative analysis show that there is a significant difference between the average values calculated for the physical environment in the hospitals of Ilam province (1.31) and its desired average at the level of 1% ($t = 8.025$; $p < 0.01$). The positive value of the measured index indicates that the hospitals of Ilam province are at a suitable level in terms of the physical environment variable compared to the standards of the senior-friendly hospital.

The results of the comparative analysis show that there is a significant difference between the average

value calculated for the status of admission and payment in the hospitals of Ilam province (0.434) and its optimal level at the level of 1% ($t = -11.188$; $p < 0.01$). Considering that the value of the target index is negative in this analysis, it can be concluded that the public hospitals of Ilam province are at a lower level than the standards of the senior-friendly hospital in terms of this index.

After summing up the score of each section and according to the score given by the respondents to each component, it is found that there is a significant difference between the average value calculated for the standards of senior-friendly hospitals in Ilam province (0.829) and its optimal level at the level of 1%. ($t = -5.499$; $p < 0.01$). Considering that the value of the statistic related to this test is negative, it can be concluded that the public hospitals of Ilam province are at a lower level than the standards of the senior-friendly hospital (Table 6).

Table 3: Frequency distribution of the departments in question in the investigated hospitals

The part	N	%
Dialysis	15	12.3
CCU	12	9.8
Inpatient emergency	15	12.3
isolated	11	9
Nursing Station	16	13.1
Hospitalization of men	1	0.8
General hospitalization	1	0.8
Internal surgery	14	11.5
Management	3	2.5
Outpatient emergency	4	3.3
ICU	12	9.8
Men's surgery	4	3.3
Gynecological surgery	2	1.6
Emergency under observation	2	1.6
cancer	2	1.3
Women's interior	3	2.5
Men's underwear	1	0.8
Women's corona	2	1.6
Men's Corona	2	1.3
Total	122	100

Table 4: Mean and standard deviation of different dimensions of the indicators of the elderly-friendly hospital in terms of the research samples (n=122)

Variable	M	SD	Max	Min
Access status	0.265	0.436	2	0
Suitable schedule for the elderly to go to the hospital	0.360	0.501	2	0
Health promotion and medical care services	0.485	0.492	2	0
Information and training	1.034	0.650	2	0
Physical environment	1.31	0.435	2	0
Toilets	1.258	0.531	2	0
Signboards	1.195	0.527	2	0
Hospitalization services	0.748	0.482	2	0
Acceptance and payment	0.434	0.558	2	0

Table 5: Comparison of public hospitals in Ilam province with the index of elderly-friendly hospitals

Hospital Mostafa	Mean	SD	standard error of the mean	t	df	Sig. (2-tailed)	95% confidence interval of the difference	
							lower limit	upper bound
Abadanan	0.725	0.349	0.063	4.299-	29	0.000	0.405-	0.144-
Mehran	0.866	0.301	0.095	1.407-	9	0.193	0.349-	0.815
Sarablah	0.966	0.253	0.073	0.455-	11	0.568	0.194-	0.128
Eyvan	0.744	0.202	0.054	4.733-	13	0.000	0.372-	0.139-
Darehshahr	0.945	0.245	0.065	0.828-	13	0.423	0.196-	0.874
Imam Khomeini	0.940	0.395	0.125	0.480-	9	0.643	0.343-	0.223
DehIran	0.734	0.365	0.086	3.081-	17	0.007	0.447-	0.083-
Hospital	0.918	0.474	0.126	0.642-	13	0.532	0.355-	0.192

Table 6: Comparison of government hospitals in Ilam province with the indicators of the elderly-friendly hospital

Access facilities to hospital	df	Calculated average	SD	T	sig
Suitable schedule for the elderly to go to the hospital	121	0.265	0.436	18.581 -	0.000
Health promotion services	121	0.360	0.501	14.093-	0.000
Information and training	121	0.485	0.492	11.531-	0.000
Physical environment	121	1.034	0.650	0.579	0.563
Toilets	121	1.31	0.435	8.025	0.000
Signboards	121	1.258	0.531	5.381	0.000
Inpatient services	121	1.199	0.527	4.174	0.000
Acceptance and payment	121	0.748	0.482	5.768-	0.000
Standards for senior friendly hospitals	121	0.434	0.558	11.188-	0.000
	121	0.829	0.343	5.499-	0.000

DISCUSSION

This research aimed to evaluate the compliance of public hospitals in Ilam with the criteria of the senior-friendly hospital. The findings of the analysis showed that the public hospitals of Ilam province had a significant difference with the standards of the senior-friendly hospital and were at a lower level than it. In this context, it can be said that the public hospitals of Ilam province mostly lack dedicated parking spaces for the elderly, they are far away from the bus stations and there is no separate and special entrance for the elderly, and apart from Shahid Mostafa Hospital and Imam Khomeini Hospital, the rest of public hospitals of Ilam is located in the outskirts of cities where patients, especially the elderly, especially need to use a car or use a telephone taxi, which is expensive for them. Imam Khomeini and Shahid Mostafa Hospital, which are located in the downtown, due to their location in the old structure of Ilam and their proximity to the city's shopping centers and several schools, have always been a place of traffic and it is difficult to access them. Adequate parking inside these hospitals is mostly impossible and very difficult on the streets around them.

The public hospitals of Ilam province are significantly different from the standards of the senior-friendly hospital in terms of the appropriate schedule for the elderly to visit the hospital and are at a lower level than that.^{12, 20- 22} This finding is in line with the results of the researches of Monfared et al., Karaki et al., Kelly et al., and Boltz and Galvin. In fact, there is a need for the appointment system, the time to request a visit by doctors, and the setting of the examination time for the elderly separately from the young and middle-aged, which in the public hospitals of Ilam, these measures are the same as the services provided to other sectors of the society.

Health promotion services in public hospitals of Ilam have a significant difference and are lower than the standards of the senior-friendly hospital. This finding is consistent with the research results of Bastani et al., Safdari et al., Karaki et al., and Ahmadi et al. In fact, there is a need for patients over 60 to be examined annually by the hospital, the hospital pharmacy gives priority to the elderly in providing medicines, the priority system for the elderly is defined in all hospital services. There is a separate queue in the hospital for the elderly. There should be a system of providing services at home for the elderly, there should be a special person as the coordinator of health care services for the elderly, and a specialist in geriatrics should be present in the hospital. The screening program for the elderly should be carried out in the center, and a separate multi-specialty clinic for the elderly should be there in public hospitals.^{1, 7, 17, 25, 20, 22, 23}

Findings showed that the level of compliance of

information and training in public hospitals of Ilam is at a level equal to or close to the standards of this variable in the senior-friendly hospital. This finding is in line with the research results of Rahmanpour et al.

The physical environment of hospitals in Ilam province is at a suitable level compared to the standards of senior-friendly hospitals. This result is in line with the research results of Ahmadi et al. Considering that Ilam is a war-torn province and due to its development trend, which has been accelerated especially in the last decade and with this province being on the path to the heights of excellence, the government has taken a special look at its infrastructure, which includes the construction of a hospital. Therefore, the public hospitals of Ilam province have been built based on the new standards of construction in this area and modern equipment and facilities have been used in them.²⁴

The status of signboards in hospitals in Ilam province is at an acceptable level compared to the standards of the senior-friendly hospital. This is not in line with the results of Karaki et al., but in line with Ahmadi et al. Due to the age conditions of the elderly, people at this age are visually weaker than when they were young, so special attention should be paid to the size of the words and their color in the signboards, and this should be considered in all signs and in all wards of the hospital.²⁵

Research limitations

In carrying out this research, the researcher was faced with limitations, the most important of which are as follows: difficult access to sources and background related to the research topic, long administrative processes to obtain permission to refer to hospitals in the province, the need for the researcher to visit all hospitals directly to ensure that the participants take the necessary care in completing the questionnaires, which cost the researcher a lot of time and money for cities such as Dehloran, Darre Shahr and Abdanan, which are located in the southern part of the province.

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CONFLICT OF INTEREST
Authors declare no conflict of interest.
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AUTHORS' CONTRIBUTION

The following authors have made substantial contributions to the manuscript as under:

Conception or Design: HT, SM
Acquisition, Analysis or Interpretation of Data: HT, SM, AA, HS, SM
Manuscript Writing & Approval: HT, SM, AA, HS, SM

All the authors agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.



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